



## Synonym

ACVR2B,ACTRIIB,MGC116908

## Source

Biotinylated Human Activin RIIB Protein, Fc,Avitag(ACB-H82F3) is expressed from human 293 cells (HEK293). It contains AA Ser 19 - Thr 137 (Accession # [Q13705-1](#)).

Predicted N-terminus: Ser 19

## Molecular Characterization

ACVR2B(Ser 19 - Thr 137) Q13705-1	Fc(Pro 100 - Lys 330) P01857	Avi
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This protein carries a human IgG1 Fc tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 41.8 kDa. The protein migrates as 50-60 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Labeling

*Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.*

## Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

## Purity

>95% as determined by SDS-PAGE.

## Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

## Reconstitution

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

## Storage

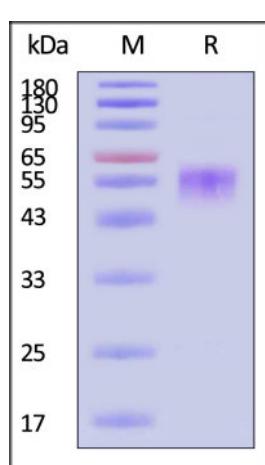
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

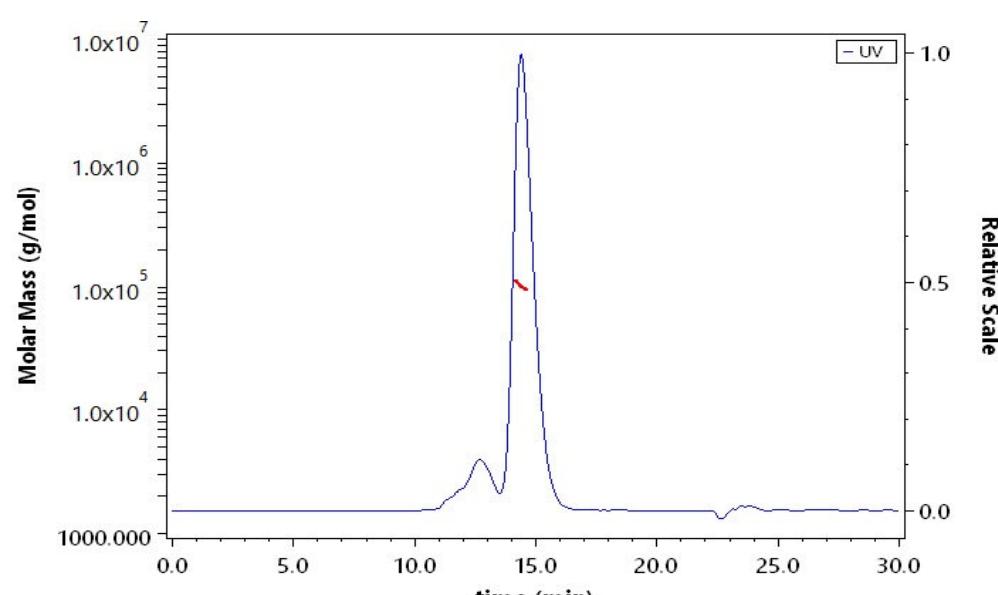
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## SDS-PAGE



Biotinylated Human Activin RIIB Protein, Fc,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

## SEC-MALS



The purity of Biotinylated Human Activin RIIB Protein, Fc,Avitag (Cat. No. ACB-H82F3) is more than 85% and the molecular weight of this protein is around 90-120 kDa verified by SEC-MALS.

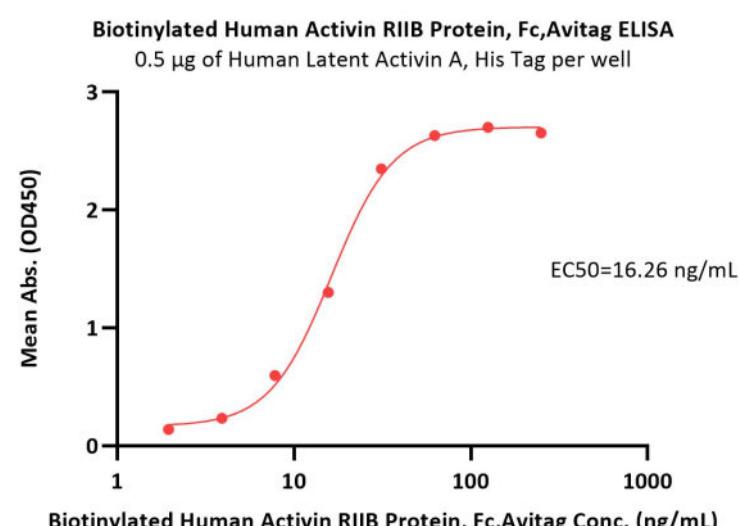
[Report](#)

## Bioactivity-ELISA

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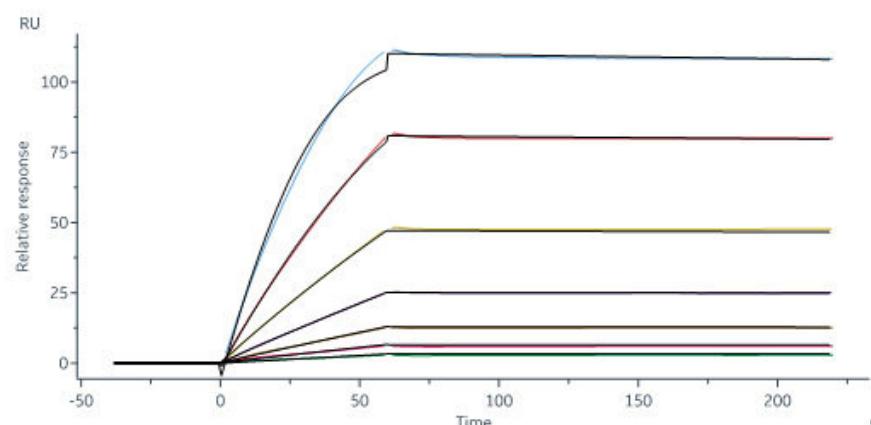


» [www.acrobiosystems.com](http://www.acrobiosystems.com)



Immobilized Human Latent Activin A, His Tag (Cat. No. ACA-H424x) at 5 µg/mL (100 µL/well) can bind Biotinylated Human Activin RIIB Protein, Fc,Avitag (Cat. No. ACB-H82F3) with a linear range of 2-31 ng/mL (QC tested).

### Bioactivity-SPR



Biotinylated Human Activin RIIB Protein, Fc,Avitag (Cat. No. ACB-H82F3) immobilized on SA Chip can bind Human Latent Activin A, His Tag (Cat. No. ACA-H424x) with an affinity constant of 46.8 pM as determined in a SPR assay (Biacore 8K) (Routinely tested).

### Background

Activin receptor type-2B (ACVR2B) is also known as ActR-IIB and MGC116908, ACVR2B is an activin type 2 receptor. Activins are dimeric growth and differentiation factors which belong to the transforming growth factor-beta (TGF-beta) superfamily of structurally related signaling proteins. Activins signal through a heteromeric complex of receptor serine kinases which include at least two type I (I and IB) and two type II (II and IIB) receptors. These receptors are all transmembrane proteins, composed of a ligand-binding extracellular domain with cysteine-rich region, a transmembrane domain, and a cytoplasmic domain with predicted serine/threonine specificity. Type I receptors are essential for signaling; and type II receptors are required for binding ligands and for expression of type I receptors. Type I and II receptors form a stable complex after ligand binding, resulting in phosphorylation of type I receptors by type II receptors. Type II receptors are considered to be constitutively active kinases. This gene encodes activin A type IIB receptor, which displays a 3- to 4-fold higher affinity for the ligand than activin A type II receptor. Defects in ACVR2B are the cause of visceral heterotaxy autosomal type 4 (HTX4).

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